BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF IMPLEMENTATION OF A BATCH CUT PROCESS	)	Case No. 03-00403-UT

AND

IN THE MATTER OF IMPAIRMENT IN ACCESS TO LOCAL CIRCUIT SWITCHING FOR MASS MARKET CUSTOMERS	)	Case No. 03-00404-UT

DIRECT TESTIMONY OF

DOUGLAS DENNEY

ON BEHALF OF

AT&T COMMUNICATIONS OF THE MOUNTAIN STATES, INC.,

DSO COST TOOL

February 16, 2004

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models, and the FCC's Synthesis Model. I have also testified about issues relating to the wholesale cost of local service -- including universal service funding, unbundled network element pricing, geographic deaveraging, and competitive local exchange carrier access rates.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my Direct Testimony is to describe and quantify the significant cost disadvantages, as recognized by the Federal Communications Commission ("FCC") in the Triennial Review Order, that an efficient competitive local exchange carrier ("CLEC") would confront in attempting to serve mass-market customers if continued access to unbundled local switching and the unbundled network element platform ("UNE-P") were denied.[1] To make this quantification, I employ the DS0 Impairment Analysis Tools ("Tools") developed by AT&T, and I explain why the Tools are the appropriate analytical framework to use in establishing the "cost disadvantage" for any efficient CLEC, describe how the Tools have been used to quantify that cost, and report the per line "cost disadvantage" quantified by the Tools for CLECS in New Mexico's LATA.

[1] *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, and Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket Nos. 01-338, 96-98 & 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, FCC 03-36 (rel. Aug. 21, 2003) (*"Triennial Review Order"* or *"TRO"*).

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. This Section, Section II, summarizes the remainder of this testimony and the range of the cost of impairment an efficient CLEC would incur if it were required to serve the mass-market using its own switches and Qwest's unbundled Loops ("UNE-L") in Qwest's operating territory in New Mexico. Section III provides an overview of the network architecture that would be deployed -- absent access to UNE-P -- by an efficient CLEC relegated to providing service using UNE-L to the mass-market and how that network architecture compares with the incumbent Local Exchange Carrier's ("ILEC's") network design. Section III also summarizes the cost impact of the CLEC's differing network design, how I have quantified this cost differential using the Tools, and why the Tools are appropriate for determining an efficient CLEC's cost disadvantage vis-à-vis Qwest. Section IV explains in greater detail each tool that comprises the Tools. In doing so,

Q PLEASE SUMMARIZE THE CLEC COST DISADVANTAGE FOR NEW MEXICO.

A. As indicated in the previous discussion, the Tools rely upon specified inputs for each of the calculations leading to the additional cost disadvantage an efficient CLEC would incur entering the mass-market. Overall, these inputs are conservative because (1) they focus only on major components of impairment and ignore other sources of impairment, (2) assume enterprise customers will defray a significant proportion of the costs of back-haul transport and collocation, and (3) ignore many of the costs that an efficient CLEC would spend for customer acquisition.

The results of my analyses, by geographic market, are set forth in Exhibit DD-4 and are summarized in Table 2 below.

Table 2: CLEC Cost Disadvantage per Line per LATA

LATA	CLEC Cost Disadvantage per Line per Month
664	$18.90

Based upon the calculations performed by the Tools and my analysis, an efficient CLEC that uses self-provided switching and UNE-L would face substantial additional costs as compared to Qwest in each geographic market served by Qwest and it is inescapable that cost disadvantages of this magnitude to the CLEC

– and corresponding cost umbrella for the ILEC – constitute a clear barrier to entry.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

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DIRECT TESTIMONY

OF

MICHAEL R. BARANOWSKI

ON BEHALF OF

AT&T COMMUNICATIONS OF THE MOUNTAIN STATES, INC.

BUSINESS CASE

February 16, 2004

can economically serve markets without access to certain unbundled network elements.

I also have experience with other network industries. I have nearly 20 years of experience consulting to the nation's major railroads and petroleum products pipelines on a variety of issues, including economic and financial studies of pricing, costing, and mergers and acquisitions.

II. INTRODUCTION, PURPOSE, AND STRUCTURE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to present the results of AT&T's Business Case Analysis Tool ("BCAT") that is used to demonstrate the economic impairment that would be suffered by an efficient CLEC providing service to mass market consumers in New Mexico if unbundled switching is unavailable. My testimony provides an overview of the BCAT, certain key assumptions, and an analysis of the results. The BCAT is relevant to the assessment of potential competition and is consistent with the FCC's recent Triennial Review Order ("TRO")[1] and the economic and regulatory framework for assessing impairment as explained in the testimony of Drs. William Lehr and Lee Selwyn.[2]

[1] *Report and Order and Order on Remand and Further Notice of Proposed Rulemaking*, In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Federal Communications Commission, CC Docket No. 01-338, (Released August 21, 2003.) ("TRO").
[2] See *Direct Testimony of William H. Lehr and Lee L. Selwyn on Behalf of AT&T*, In the Matter of the Implementation of the Federal Communications Commission's Triennial Review Order Adopting New Rules for Network Unbundling Obligations, Before the Public Regulation Commission of the State of New Mexico, Case Nos. 03-00403-UT and 03-00404-UT, February 9, 2004 (hereafter, referred to as "Testimony of Drs. Lehr and Selwyn").

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Q. PLEASE SUMMARIZE THE MAIN CONCLUSIONS YOU REACH IN YOUR TESTIMONY.

A. The principal conclusions that are explained in my testimony include the following:

(1) Efficient CLEC entry to serve mass market customers in New Mexico would be unprofitable without access to unbundled switching. A CLEC should expect to realize large negative returns if it attempted to execute the efficient business plan.

(2) The BCAT provides a conservative estimate of the likely economic losses associated with seeking to serve mass market consumers without unbundled switching in New Mexico. Actual losses would likely be larger.

(3) The BCAT model uses the best available, verifiable data in its formulation. This includes relying on granular, New Mexico-specific inputs wherever possible. This is consistent with the TRO and its proper application as explained in Drs. Lehr and Selwyn's testimony.

Q. HOW IS THE REST OF YOUR TESTIMONY ORGANIZED?

A. The balance of my testimony is organized into the following three sections: Section III provides an overview of the BCAT and summarizes the main results; Section IV provides a more detailed discussion of the business case for potential CLEC competition that demonstrates impairment in the absence of unbundled switching for mass market customers; Section V is the conclusion. **Exhibit MRB-1** to my testimony includes the BCAT and the results for New Mexico, and **Exhibit MRB-2** contains the inputs document for the BCAT.

Q. HOW DOES THE BCAT DEVELOP COSTS ASSOCIATED WITH UNCOLLECTIBLE REVENUE?

A. A portion of customer revenues is never collected by carriers, including the hypothetical efficient CLEC, because of customer bankruptcy, refusal to pay due to dispute, or service abandonment. The BCAT incorporates these costs by applying separate uncollectible rates (percentages) to retail revenues, access revenues and reciprocal compensation revenues. To be conservative, the BCAT relies on ARMIS data on uncollectibles.

V. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. In order to determine whether an efficient CLEC can profitably serve mass-market customers in New Mexico, AT&T developed the Business Case Analysis Tool (BCAT). The BCAT estimates the total revenues and costs that an efficient CLEC would expect to incur if it used UNE-L and CLEC-owned switching to serve mass market customers in New Mexico.

The BCAT relies upon inputs and is consistent with the DS0 Impairment Tool that is discussed in the testimony of Douglas Denney. The BCAT estimates the revenues and other costs not considered in the DS0 Impairment Tool that would be incurred by an efficient CLEC over a ten year planning horizon.

The BCAT analysis demonstrates that an efficient CLEC would realize substantial negative returns in serving the mass market using CLEC-owned switching. This result is not surprising in light of the significant cost disadvantage demonstrated

by the DS0 Impairment Tool, and confirms the TRO's national finding of impairment with respect to mass market switching.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

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DIRECT TESTIMONY

OF

ROBERT V. FALCONE

ON BEHALF OF

AT&T COMMUNICATIONS OF THE MOUNTAIN STATES, INC.

NETWORK ARCHITECTURE

FEBRUARY 16, 2004

implementation of a new circuit switched network in Canada in a joint venture with Unitel of Canada and implementation manager for AT&T's conversion of its access network to SS7 out-of-band signaling. In 1994, I was promoted to a District Manager responsible for headquarters support of AT&T's local market network implementation. In 1997, I was promoted to a Division Manager responsible for supporting the AT&T regions with local market entry initiatives. I retired from AT&T in June of 1998. After retiring from AT&T, I have worked as a self-employed consultant for numerous clients including: AT&T, CompTel, BearingPoint (formerly KPMG Consulting) and Liberty Consulting. While working as a subcontractor with BearingPoint I was the group leader for BearingPoint's Systems Engineering Organization on the ILEC Operational Support System (OSS) testing team. In this role I was responsible for the test planning, test bed development and test execution for BearingPoint's various ILEC OSS 271 testing efforts, including the Regional "ROC" test of Qwest's OSSs.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The differences in the way end users' loops are connected to ILEC switches and the way they are connected to CLEC switches are among the most important factors that cause CLECs to face substantial operational and economic entry barriers when they seek to offer Plain Old Telephone Service ("POTS") to mass-market (residential and small business) customers using their own switches and ILEC-provided loops (i.e., via unbundled network element-loop or "UNE-L" facilities-based entry).

Accordingly my testimony:

- Compares the significantly different network architectures available to an ILEC and a CLEC when each wishes to use an ILEC-owned voice-grade loop to connect a mass market customer with its respective switch to provide POTS; and
- Provides an overview of the network architecturally-based operational and economic entry barriers to successful UNE-L facilities-based entry.
- Submits an illustrative aid in the form of a DVD describing the CLEC network and hot cut process. *See* **Exhibit 1.**

Q. DID THE FCC MAKE ANY FINDINGS IN THE TRIENNIAL REVIEW ORDER ("*TRO*") REGARDING THE ISSUES YOU DISCUSS?

A. Yes. The FCC found on a national basis that CLECs are impaired in serving the mass market in the absence of unbundled ILEC switching.[1] This finding was based on an analysis that began with the simple, self-evident proposition that CLECs cannot use their own switches, in lieu of the ILECs', unless they can connect their switches to their end-users' loops. The FCC explained:

> Competitive LECs can use their own switches to provide services only by gaining access to customers' loop facilities, which predominately, if not exclusively, are provided by the incumbent LEC. Although the record indicates that competitors can deploy duplicate switches capable of serving all customer classes, without the ability to combine those switches with customers' loops in an economic manner, competitors remain impaired in their ability to provide service. Accordingly, it is critical to consider competing carriers' ability to have customers' loops connected to their switches in a reasonable and timely manner.[2]

[1] *TRO* at ¶¶ 422 & 459.
[2] *TRO* at ¶ 429 (emphasis added).

To emphasize the importance of the ability of CLECs to connect their switches to the loops of their end-users, the FCC noted that no party disputed that competitors need access to the ILECs' loops to compete in the mass market.[3]

Q. WHAT DO THE ISSUES YOU WILL DISCUSS HAVE TO DO WITH THESE FINDINGS BY THE FCC?

A. As discussed in the testimony of William H. Lehr and Lee L. Selwyn, the absolute cost disadvantages experienced by CLECs trying to serve mass market customers using UNE-L make it impossible to combine UNE loops and CLEC switches in an economic manner. Those cost disadvantages result in large part from the differences in network architecture that are the subject of my testimony.

In fact, the FCC found that the failure of CLECs to utilize their existing enterprise switches to be probative evidence of significant barriers making entry uneconomic.

> We found significantly more probative the evidence that in areas where competitors have their own switches for other purposes (e.g., enterprise switches), they are not converting them to serve mass market customers and instead relying on unbundled loops combined with unbundled local circuit switching. Given the fixed costs already invested in these switches, competitors have every incentive to spread the costs over a broader base. Their failure to do so bolsters our finding that significant barriers caused by hot cuts and other factors make such entry uneconomic.[4]

> We find . . . that the fact that competitors have not converted unbundled loops combined with unbundled local switching or served residential customers with existing switches only serves to demonstrate the barriers to such service.[5]

[3] *TRO* at n. 1316.
[4] *TRO* at ¶ 447, fn.1365.
[5] *TRO* at ¶ 449, fn.1371 (citations omitted).

In addition, these network architecture issues are relevant to understanding the batch cut process and to understanding the operational impairment CLECs face. They also are important to understanding how to categorize carriers as part of the FCC's trigger analysis.

Q. FROM A NETWORK ARCHITECTURE PERSPECTIVE, WHAT IS THE FUNDAMENTAL OR CENTRAL PROBLEM THAT CAUSES CLECS TO BE IMPAIRED IN THEIR ABILITY TO SERVE MASS MARKET CUSTOMERS USING UNE-L?

A. As discussed in detail below, the central problem is that the ILECs' legacy network architecture was designed to support a single regulated monopoly provider, not a competitive market with multiple service providers seeking access to the ILEC's loops. This architecture allows an ILEC to connect its legacy loops to its own switches within the ILEC's wire center to provide service to end user customers. However, the legacy ILEC network architecture provides an inefficient and uneconomic means for a CLEC that tries to connect those same loops to its switch which, in New Mexico, is always remotely located from the ILEC central office where these loops terminate. This fundamental structural difference creates overwhelming operational and economic advantages for the ILEC – advantages that make it both impractical and uneconomic for CLEC competitors to compete with the ILEC to serve mass-market customers ubiquitously using a UNE-L architecture.

Q. WHAT ARE THE KEY COMPONENTS OF THIS STRUCTURAL DISADVANTAGE?

A. There are five key components to this structural disadvantage.

First, a CLEC must incur the time and cost to install and maintain a significant "backhaul" network infrastructure to connect its switch to the ILEC loops that terminate in the ILEC's wire center, which may also be referred to as a central office ("CO") or local serving office ("LSO"). The ILEC has no such need for backhaul facilities. As the FCC explained in the TRO, "The need to backhaul the circuit derives from the use of a switch located in a location relatively far from the end user's premises, which effectively requires competitors to deploy much longer loops than the incumbent."[6] These CLEC backhaul costs include the non-recurring costs necessary to establish a collocation arrangement in every ILEC wire center in which the CLEC wishes to offer mass market services, the recurring costs paid to the ILEC for maintaining these collocation arrangements, as well as the transport equipment and facilities necessary to extend the ILEC's loops to the remotely located CLEC switch.

Second, a CLEC using UNE-L must aggregate traffic from many locations to achieve the same switch economies of scale realized by an ILEC at a single location. This forces the CLEC to incur its backhaul cost disadvantage in many wire centers to achieve the type of switch scale economies that the ILEC achieves at a single wire center.

[6] *TRO* at ¶ 480 (citations omitted); *see* also *TRO* at ¶ 464, n. 1406; *TRO* at ¶ 424, n. 1298; and *TRO* at ¶ 429.

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Third, the CLEC must pay the ILEC for transferring loops from the ILEC switch to a CLEC collocation facility, or from one CLEC to another. This transfer process, commonly known as a "hot cut," also forces the CLEC's customers to suffer an inferior experience in converting to the CLEC's service compared with the treatment they can receive using UNE-P, or that interexchange carriers -- including the ILECs -- can offer customers using the Primary Interexchange Carrier ("PIC") change process for allowing customers to change their long distance service provider.

Fourth, because of the way ILECs have chosen to provision UNE-Ls that pass through integrated digital loop carrier ("IDLC") systems, CLECs may be precluded from serving an entire segment of retail customers unless the ILEC has the spare non-IDLC loop plant in place to replace these customer's lines so that they are eligible for a UNE-L migration to a CLEC.

Finally, because the CLECs do not have the traffic volumes that the ILEC does, they cannot efficiently exchange inter-switch traffic at a switch-to-switch level. As a result the CLECs will be reliant on the ILEC's tandem network for the exchange of this traffic. This reliance will both increase CLEC costs and potentially cause CLECs to experience additional operational impairments, such as inadequate subtending trunking.

Q. PLEASE DESCRIBE HOW THE REMAINDER OF YOUR TESTIMONY IS ORGANIZED.

A. **Section II** provides a historical overview of how the ILECs' networks developed and the principles underlying their evolution in a monopoly environment.

Section III describes how end-user locations are connected to ILEC switches and why that service configuration has serious implications for mass-market competition.

Section IV describes CLEC networks and how the incumbents' closed and integrated network architecture causes quantifiable and significant cost, operation disadvantages and barriers for a new entrant.

Section V briefly describes the impairment created by the way ILECs deploy IDLC technology and have chosen to provision UNE-L around it.

Section VI provides my concluding opinions.

II. PRINCIPLES UNDERLYING THE DEVELOPMENT OF ILEC NETWORKS

Q. PLEASE PROVIDE AN OVERVIEW OF THE PRINCIPLES UNDERLYING THE HISTORICAL DEVELOPMENT OF ILEC NETWORKS.

A. The essence of the telephone network is *connecting* one party to another, whether they are physically located near each other or separated by considerable distance. There is value in merely being *able* to call any party on the network, or likewise being *able* to receive calls from any party on the network. In theory, the more parties that can be reached, the greater the value of the network. The nature of voice communication is that even brief conversations, such as emergency calls, can be of great value. Telephone networks are predominantly designed to facilitate relatively short, private, one-to-one, bidirectional communications. The telephone network must stand ready to complete any particular call (or tens of millions of calls) at any

VI. CONCLUSION

Q. CAN THE FUNDAMENTAL CHARACTERISTICS OF THE EXISTING SINGLE-USE ILEC NETWORK BE MITIGATED WITHOUT TECHNOLOGICAL CHANGE?

A. No. Until the underlying local network architecture that has created these impairments is changed, CLECs will continue to face significant practical and economic impairments in serving mass-market end-users on ILEC loops *via* their own switches.

Q. PLEASE SUMMARIZE THE CRITICAL ISSUES YOU DISCUSS IN YOUR TESTIMONY.

A. The critical issue of this proceeding is not whether CLECs can "deploy" their own switches. Instead, the critical issue upon which this Commission should focus is whether a CLEC can "efficiently use" its own switch to connect to the local loops of end users. The differences in the way end users' loops are connected to carriers' switches are among the most important factors that cause CLECs to face substantial operational and economic entry barriers when they seek to offer POTS to mass-market (residential and small business) customers using their own switches and ILEC-provided loops (i.e., UNE-L facilities-based entry). The barriers to which I refer relate primarily to the requirements that CLECs backhaul UNE-L traffic from the serving ILEC wire center to the CLEC switch.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, at this time.

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF IMPLEMENTATION OF A BATCH CUT PROCESS **Case No. 03-00403-UT**

and

IN THE MATTER OF IMPAIRMENT IN ACCESS TO LOCAL CIRCUIT SWITCHING FOR MASS MARKET CUSTOMERS **Case No. 03-00404-UT**

DIRECT TESTIMONY OF

TIMOTHY J GATES

Operational Impairment

ON BEHALF OF

WORLDCOM, INC. (MCI)

PUBLIC VERSION

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Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. At paragraph 419 of its *Triennial Review Order*,[1] the Federal Communications Commission ("FCC") found, on a national basis, that competitive local exchange carriers ("CLECs") are impaired without access to unbundled local switching when attempting to serve the "mass market."[2] The FCC pointed specifically to certain economic and operational criteria that served as the basis for its impairment finding, and asked state commissions to review these issues in more detail as they contemplate whether the finding of impairment should be overturned in any of the telecommunications markets within their jurisdictions. *See Triennial Review Order* ¶ 493. At paragraph 476 of the *Triennial Review Order*, the FCC describes a number of economic and operational factors, including for example, issues related to incumbent local exchange carrier ("ILEC") unbundling performance, collocation and the lack of processes and procedures facilitating the transfer of loops from one CLEC's switch to another CLEC's switch. The FCC specifically identified these types of issues as those it believed could add to the impairment faced by CLECs attempting to provide services via UNE loop ("UNE-L") as compared to the relative ease with which CLECs can provide such services utilizing the UNE platform ("UNE-P").[3]

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[1] *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, and Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket Nos. 01-338, 96-98 & 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, FCC 03-36, ¶ 3 (rel. Aug. 21, 2003) ("*Triennial Review Order*" or "*TRO*").

[2] Enterprise market customers are those that could be economically served by a DS1 loop, even if they presently are being served by DS0 loops. Mass market customers are those that could not be economically served by a DS1 loop.

[3] UNE-P is simply the CLEC using an existing Qwest finished service which includes the unbundled loop, transport, line port and local switching. In Qwest's Wholesale Product Catalog, UNE-P is defined as:

Qwest Corporation ("Qwest") has requested the New Mexico Public Regulation Commission ("Commission") to enter a finding of "non impairment" with respect to unbundled local switching for mass market customers in the Albuquerque Metropolitan Statistical Area ("MSA") and possibly the Santa Fe, Las Cruces and Farmington MSAs and to remove unbundled local switching ("ULS") from the list of available unbundled network elements ("UNEs").[4] The purpose of this testimony is to describe why operational, network, and technological factors give rise to impairment, and to describe how CLECs generally, and MCI specifically, are impaired in their effort to serve the mass market without access to ULS in today's environment. This testimony also describes ways in which many of the factors leading to today's impairment can be overcome with active oversight on the part of the Commission and cooperation of the industry.

Q. BEFORE SUMMARIZING YOUR TESTIMONY, DO YOU HAVE ANY GENERAL COMMENTS?

A. Yes. I believe it is critical to highlight the fact that UNE-P is successful today as a tool for mass market competition in large part because (1) a host of talented people and an enormous number of resources (Commission resources, CLEC resources, Attorney General's Office resources and Qwest resources alike) were dedicated to its development as a commercially viable delivery platform over a period of many years (with the last four years exhibiting the most focused efforts),

"Qwest provides UNE-P POTS combinations as a finished service to end-users *on behalf of CLECS.* UNE-P POTS provides service similar in functionality as Qwest's retail residential and business services." (emphasis added)

[4] See, Qwest's Initial Status Report, filed with this Commission in this docket on December 19, 2003.

and (2) because it involves the end-to-end leasing of Qwest's facilities, UNE-P provides CLECs access to the customer's loop in much the same manner as that available to Qwest.[5] Further, much of the success of UNE-P must be attributed to the cooperation, however reluctant, on the part of Qwest to overcome operational and business-related barriers, based at least in part on its desire for §271 relief in New Mexico and the other 13 in-region states.

To assume that the more challenging operational, technical, and network hurdles associated with UNE-L, which requires the connection of an unbundled loop facility with the CLEC's switch, will be overcome in a mere nine-month timeframe is not reasonable. Further, to assume such hurdles can be overcome in this limited timeframe without incentives on the part of Qwest that has, for the most part, already been released from market restrictions via §271 proceedings, is even more difficult to support.[6] It is more logical to assume that the operational and technological issues giving rise to impairment will be resolved over time, and true loop portability – as described throughout this testimony – will become a reality only with the guidance and oversight of state commissions and proper incentives for Qwest cooperation.

Q. ARE THERE PARTICULAR ISSUES THE COMMISSION SHOULD KEEP IN MIND RELATIVE TO IMPAIRMENT FOR MASS MARKET SWITCHING AND EFFORTS MADE TO MITIGATE THAT IMPAIRMENT OVER TIME?

A. Yes. To the extent this Commission determines that the UNE-L strategy should become more widely implemented, it must recognize that transferring a

[5] Here, "commercially viable" is meant to address efficiency (from both Qwest and CLEC perspectives),

customer's service from the local switch of one carrier to that of another relies upon numerous Operation Support System ("OSS") processes and procedures, as well as the availability and reliability of network elements, comprising a chain of connectivity between the customer and his/her local service provider of choice. Because of this necessary chain of connectivity, even if one assumes that Qwest's hot cut processes can become seamless and efficient at some point in the future, CLECs are likely to remain impaired as a result of numerous operational and technological issues affecting loops, collocation, and transport.[7] Hence, it is imperative that the Commission remain focused on each of these issues when evaluating impairment and keep an unwavering eye on the primary objective—to ensure that mass market consumers can, at ever increasing volumes, transfer their services from one facilities-based local service provider to another without service disruption or other service impacting problems.

Q. ARE THERE BENCHMARKS AGAINST WHICH UNE-L PROVISIONING PROCESSES, LIKE THE BATCH HOT CUT PROCESS, SHOULD BE MEASURED RELATIVE TO THE SEAMLESSNESS AND RELIABILITY YOU ALLUDE TO ABOVE?

A. Yes. Throughout this testimony, I will point the Commission to the largely seamless and reliable nature of the existing UNE-P process as the benchmark to which UNE-L provisioning processes should be held if the impairment finding is to be overcome. A move to UNE-L as a mass market delivery method cannot occur until Qwest's processes can support the seamless and reliable provisioning

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reliability, timeliness, and economics.

[6] For example, Qwest received 271 approval for New Mexico on April 15, 2003.

[7] Indeed, the FCC found that hot cuts are not the only issue that may give rise to impairment. For instance, see paragraph 476 of the TRO.

of loops to multiple carriers at commercial volumes on a day-to-day basis, consistent with the manner in which they currently accommodate CLEC orders via UNE-P. MCI recommends that the Commission maintain the national finding of impairment throughout all telecommunications markets in the State of New Mexico until such time as UNE-L can realistically replace UNE-P as a tool for serving mass market customers. This will, at a minimum, require resolution of the many operational issues that I address in the remainder of this testimony, as well as those discussed by MCI witnesses, Cox and Cabe.

Q. THERE IS A GOOD DEAL OF DISCUSSION IN THE FCC'S *TRIENNIAL REVIEW ORDER* REGARDING "TRIGGERS" AND ANALYSIS RELATED TO "ACTUAL DEPLOYMENT." IS YOUR TESTIMONY RELEVANT TO THOSE ISSUES?

A. Absolutely. As Dr. Cabe discusses in his testimony, the trigger analysis is meant to examine whether mass markets consumers have three real and current choices available to them through facilities-based carriers.[8] The stated intention of the trigger analysis is to give weight to evidence that carriers in the real world are actively providing service to mass market customers without UNE-P, and that those carriers could continue to serve mass market customers within the entire identified market if UNE-P were discontinued. If these "triggering" carriers are able to provide services without UNE-P within the relevant market today and have the ability to continue providing it in the future, those alleged "triggering" companies must have overcome operational issues related to accessing Qwest's loop facility. Nonetheless, to qualify as a legitimate "trigger," the carrier would be required to overcome these obstacles on a going forward basis,[9] and perhaps to overcome them in areas of the market where it does not currently offer services.[10]

In evaluating the legitimacy of an identified trigger, the Commission needs to understand what operational issues exist relative to a UNE-L delivery strategy,

[8] Or in a less likely circumstance, whether carriers have two wholesale alternatives from facilities based carriers within the relevant market.

[9] See TRO at paragraph 500 where the FCC states: "The key consideration to be examined by state commissions is whether the providers are currently offering and able to provide service, ***and are likely to continue to do so.***" (Emphasis added). See also paragraph 495 of the TRO that also addresses "...customers actually being served."

[10] See TRO at paragraph 499 where the FCC states: "They should be capable of economically serving the entire market, as that market is defined by the state commission. This prevents counting switch providers that provide services that are desirable only to a particular segment of the market."

and how the identified trigger company overcomes those obstacles throughout the market, both today and in the future.

Q. PLEASE BRIEFLY SUMMARIZE YOUR CONCLUSIONS.

A. As discussed in Ms. Page's testimony, MCI intends to move toward serving its mass market customers using its own switching, collocation and transport facilities in combination with Qwest-provided unbundled loops. MCI intends to pursue this strategy in locations where certain operational and economic hurdles can be overcome and when it is operationally and economically feasible. However, this strategy is critically dependent upon reliable access to the customer's loop, OSS, processes, procedures and other facilities needed to ensure that loops can be successfully extended to CLEC switching facilities and maintained on an on-going basis.

Q. ARE THE ISSUES YOU ARE ALLUDING TO ALLEVIATED WITH AN EFFECTIVE HOT CUT PROCESS?

A. No, they are not. While an improved hot cut process is critical to a workable UNE-L platform, numerous other operational issues give rise to the impairment CLECs face today without access to UNE switching. The Commission should recognize that moving from a UNE-P to a UNE-L strategy requires a true paradigm shift for both the CLEC and the underlying loop provider, Qwest. And, based upon the operational issues described in this testimony, as well as the customer impacting issues discussed in Mr. Cox's testimony, MCI would be uncomfortable migrating its UNE-P customer base to a UNE-L strategy in the

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and

IN THE MATTER OF IMPAIRMENT IN ACCESS
TO LOCAL CIRCUIT SWITCHING FOR
MASS MARKET CUSTOMERS — Case No. 03-00404-UT

DIRECT TESTIMONY

OF

RICHARD CABE

ON BEHALF OF

WORLDCOM, INC. ("MCI")

February 16, 2004

aspiring new entrants into local telecommunications markets, state commissions, and consumer advocates.

Finally, I am not a lawyer, and to the extent I discuss orders of the FCC or courts or the New Mexico Public Regulation Commission, or evidence presented to those bodies, I provide citations and the text referred to speaks for itself and controls anything I express in my testimony. I am not, therefore, attempting to offer legal opinions, but rather citing to the language to provide a context for any statement I make. My resume is attached as Exhibit RC-1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to provide the New Mexico Public Regulation Commission ("Commission") with recommendations for conducting its impairment analysis for the local switching Unbundled Network Element ("UNE"). MCI has asked me to provide the Commission with the proper economic framework for conducting its analysis consistent with the FCC's directions in the *Triennial Review Order*.[1] In addition, I will present my market definition analysis, apply that market definition to the FCC's prescribed trigger analyses, and discuss the Commission's task of evaluating the prospect of potential deployment.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. I begin the substantive portion of my testimony with an analysis of the appropriate market definition for the Commission's investigation. Economic theory and

[1] *See* Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carrier*, CC Docket No. 01-338, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, FCC 03-36, ¶ 495 (rel. Aug. 21, 2003)("*Triennial Review Order*").

Use of the wire center as the basic building block for analysis accomplishes the FCC's goals of a granular analysis that maximizes accuracy of results, subject to the constraints of practicality.[4] In addition, a wire-center market definition makes sense because the wire center is the place where Qwest and other incumbent local exchange carriers' ("ILECs" or "incumbents") local switches actually reside and the wire-center boundaries accurately define the physical territory that at least some competitors or potential competitors might no longer be able to serve should the Commission find "no impairment" without access to unbundled local switching at any particular switch. Hence, a wire-center market definition is a practical choice as well.

In contrast, a market definition based on a larger geographic area, such as the Metropolitan Statistical Area ("MSA"), creates a significant risk that trigger or potential deployment analyses based on such a market definition will result in a finding of no impairment in places where multiple, competitive supply does not exist today and is unlikely to occur in the foreseeable future.

I urge the Commission to adopt the wire center as the starting point for all subsequent impairment analyses. I also recommend that the Commission adopt a product market definition that includes all local exchange service options that provide service at a cost, quality and maturity equivalent to Qwest's offerings. This product market definition should explicitly exclude Commercial Mobile Radio Service ("CMRS"), fixed wireless and cable telephony.

I next provide my analysis and recommendations for the Commission's trigger analyses. I recommend that the Commission conduct its trigger analysis (and any

[4] *Triennial Review Order* ¶ 130.

subsequent potential deployment analysis) in a way that evaluates whether (1) residential and small business customers should be treated as being in separate markets,[5] even at the wire-center level, and (2) whether customer locations served over integrated digital loop carrier ("IDLC") should be treated as residing in a separate submarket for which unbundled switching would continue to be available, even if a finding of no impairment were otherwise justified for the remainder of a given wire center. In any event, the Commission should take note of companies that are not actively providing residential service with their own switches (*i.e.*, companies that only provide business service). Such companies provide no evidence of actual mass-market entry, beyond the business segment they actually serve, and should not be counted in the Commission's trigger analyses as instances of actual entry that provide evidence of overcoming barriers to entry that have not, in fact, been overcome.

The FCC has made a national finding of impairment with respect to mass-market switching.[6] The Commission should not find that the trigger requirements have been satisfied unless and until the Commission determines that all mass-market customers in that market have a real and current choice among three carriers who are providing local service via their own switching using Qwest's loop plant.

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[5] As I explain in detail later in this testimony, my suggestion that the Commission consider whether there are separate residential and small business markets is intended as a subdivision of the broader mass market, which the FCC has defined in light of the crossover between serving customers via voice-grade loops (which it calls DS0s) and serving them via high-capacity DS-1 loops. 47 C.F.R. § 51.519(d)(2)(iii)(B)(4). Selecting a breakpoint between mass market and enterprise customers is a complex and necessarily customer-specific endeavor. In Section III.E below, I recommend that the Commission adopt the approach proposed by Verizon in other jurisdictions to allow the market to "validate" the efficient crossover point.

[6] *Triennial Review Order* ¶ 459.

Pursuant to the rules set forth by the FCC in the *Triennial Review Order*, a carrier can only be considered as a triggering company for mass-market switching if it meets specific requirements in the following four areas: (1) corporate ownership; (2) active and continuing market participation; (3) intermodal competition; and (4) scale and scope of market participation. Applying these criteria rigorously in a properly defined market is essential to ensuring that "[i]f the triggers are satisfied, the states need not undertake any further inquiry, ***because no impairment should exist in that market.***"[7]

At this point, I have not identified any wire centers in Qwest's service territory for which I believe that either the wholesale or retail trigger has been met. I will, however, respond to Qwest's trigger-based claims of no impairment, if any, in the next round of my testimony. At that time, I will also identify whether there may be any "exceptional circumstances" that would warrant overriding a finding of no impairment, if in fact such finding were justified based on the evidence.

Finally, I provide my analysis and recommendations for the Commission's potential deployment analysis. In the absence of clear evidence of no impairment in the form of actual self-provisioning by CLECs or wholesale trigger analysis that satisfies the "bright-line rule" of the FCC's prescribed trigger analysis, the analysis may proceed to the possibility of potential deployment to test whether barriers to entry without unbundled access to a network element are "likely to make entry into a market uneconomic," or whether the market in question is "suitable for 'multiple, competitive supply.'"[8] This analysis must be conducted on a market-by-market basis, analyzing the same markets that are used in the trigger analyses. At this stage of the analysis, the Commission must

[7] *Id.* ¶ 494 (emphasis added).

consider any local switching capacity of market participants identified in the trigger analyses in concert with analysis of operational and economic barriers to entry.

In concert with analysis of operational barriers and any actual entry, an analysis of potential deployment evaluates CLEC costs and anticipated revenues to determine whether CLEC operations without access to unbundled local switching are likely to be profitable and support multiple competitive entry. My testimony provides a discussion of the types of costs and revenues that the Commission should consider in a potential deployment analysis, and I discuss the interpretation of results from such an analysis. The remainder of my testimony explains the basis for each of these conclusions and recommendations.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. The following introductory Impairment Analysis section (Section II) places the issues in this proceeding into context. The body of my testimony is organized to correspond to the two-step analytical process outlined by the FCC. The first of these steps encompasses market definition and analysis of triggers, which I address in that order (Sections III and IV of my testimony, respectively). The second step pertains to "post-trigger" analysis and is split into two sub-steps, the first of which addresses further inquiry into markets where there is a claim that triggers are satisfied (Section V.A of my testimony) and the second of which addresses the analysis of potential deployments in markets where triggers are not satisfied (Section V.B of my testimony). I present my conclusions in Section VI.

[8] *Id.* ¶¶ 84, 506.

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF IMPLEMENTATION
OF A BATCH CUT PROCESS Case No. 03-00403-UT

and

IN THE MATTER OF IMPAIRMENT IN ACCESS
TO LOCAL CIRCUIT SWITCHING FOR
MASS MARKET CUSTOMERS Case No. 03-00404-UT

DIRECT TESTIMONY

OF

CEDRIC COX

ON BEHALF OF

WORLDCOM, INC. ("MCI")

Public Version

February 16, 2004

the numerous current customer-impacting operational barriers that must be eliminated in order for MCI to make this transition fully. My testimony also explains that if MCI were forced to switch to its own facilities on a flashcut basis because unbundled local switching was prematurely eliminated, customers and competitors would face severe negative consequences.

II. SUMMARY OF TESTIMONY

Q. Please summarize your testimony.

A. Qwest Corporation ("Qwest") is asking the Commission to remove switching as an unbundled network element ("UNE") in various parts of this state. In practical terms, if the Commission grants that request, it means that the UNE platform as we know it today will be reduced or disappear. If MCI is able to move to its own facilities to provide service to mass market customers in a methodical and coordinated manner, elimination of Qwest switching may not have significant consequences for customers, depending on when and where the cutover occurs. However, premature withdrawal of switching before the appropriate processes and systems are in place will have significant adverse consequences for consumers, carriers and competition.

In this testimony, I lay out some of the operational challenges (and proposed solutions) that exist for carriers, like MCI, that are moving to their own facilities for mass markets customers.[1] Other operational challenges relating directly to network and technology challenges are presented in Mr. Gates' testimony. The operational issues addressed in my testimony relate to the "customer's experience" as she or he attempts to switch carriers, not just to MCI from Qwest, but to MCI from other competitive local

[1] Additional operational issues will likely arise as MCI begins to move to UNE-L to serve the mass market.

exchange carriers ("CLECs"), and away from MCI to Qwest or other CLECs. These issues stem from, in one way or another, the physical changes required when a CLEC uses its own facilities in conjunction with Qwest unbundled loop, and the difficulty in exchanging information about customers between all carriers in the seamless manner that mass market customers who tend to switch carriers frequently have come to expect. Specifically, the issues that we have identified here as well as those in the network operational testimony must be fully defined and resolved before UNE-L can become a reality for the mass market. The issues in my testimony are summarized below as are the proposed solutions or first steps recommended by MCI to address these issues.

1. Standard processes and procedures must be developed to obtain and share customer service records ("CSR"). MCI proposes that a distributed database be developed, shared and maintained by incumbent local exchange carriers ("incumbents" or "ILECs") and competitors alike.

2. Loop information databases must be accurate and current. MCI proposes that these databases be audited for accuracy and a process be developed to ensure timely maintenance.

3. Trouble handling processes must be adapted for a mass market world. MCI proposes that all parties develop internal processes (if they do not already exist) to ensure that trouble handling functions properly in a world with mass market volumes.

4. The industry must ensure that required E911 changes are sequenced correctly and occur efficiently. MCI proposes that a collaborative forum be convened to ensure compliance with existing standards as well as

coordination among industry participants including the Public Service Answering Points ("PSAPs") in New Mexico to ensure that all parties can handle the increased volume of transactions.

5. The industry must ensure that number portability processes that are in place are coordinated and can handle mass market volumes. MCI proposes that the commission convene a collaborative that includes the third party administrator to determine the systems capabilities in a mass market environment. In addition, MCI proposes that a scalability analysis be conducted to confirm that capability.

6. The directory listing process must be evaluated for efficiency in a mass market UNE-L environment. MCI proposes that process be developed to limit the number of times the directory information must be inserted and deleted from the directory.

7. The industry must ensure that the caller name and line information databases can be accessed and loaded with minimal inaccuracy. MCI proposes that competitors be allowed to obtain a "dump" of the incumbent's databases to ensure accuracy and quality service.

For CLECs, these operational barriers impair their ability to use their own facilities effectively when serving mass market customers. But even more important, these operational difficulties create frustration and potentially serious problems for consumers, including the inability to make or receive calls, errors in the 911 address data base, and the need to re-program/re-install some customer-programmable features. In discussing the complex technical issues involved in transitioning carriers from existing UNE-P arrangements to UNE loops connected to CLEC switches, it is easy, sometimes,

to forget about the effect of such a transition on the customer. Competitive carriers, like MCI, must place an emphasis on making the transition transparent to the customer onto or off of MCI"s services. At the end of the day, ultimately this is about the consumer and the quality of service she or he will receive when making competitive choices.

It is one thing to identify problems that CLECs encounter in a dynamic and rapidly shifting market, but it is another to find solutions to these problems. As part of this proceeding, MCI will be asking for this Commission's help in removing operational barriers and impairments so that MCI (and other CLECs) can use their own facilities to interconnect efficiently with Qwest and provide service to mass markets customers instead of always having to rely on leasing Qwest's facilities.

III. OPERATIONAL IMPAIRMENT AS RECOGNIZED BY THE FCC

Q. Does MCI currently provide local services to residential customers in New Mexico?

A. Yes. After years of laying the necessary operational and regulatory groundwork, MCI began providing local service to New Mexico residential and small business consumers via UNE-P in January 2003. MCI now serves thousands of New Mexico consumers using UNE-P, the only service delivery method that has proved successful thus far in bringing local service to the mass market. MCI would like to move its New Mexico customers to UNE-L when it is operationally and economically feasible, since it would prefer to serve these customers whenever possible over its state-of-the-art network and because it wants to provide voice and DSL service using the same network and promote further innovation of its products and services through development and deployment of new technology. Moreover, as MCI begins to roll out its broadband

BEFORE THE NEW MEXICO

PUBLIC REGULATION COMMISSION

In the Matter of Implementation Of A Batch Cut Process	)	Case No. 03-00403-UT
And	)	
In the Matter of Impairment In Access To Local Circuit Switching for Mass Market Customers	)	Case No. 03-00404-UT

Direct Testimony of

Ben Johnson, Ph.D.

Ben Johnson Associates, Inc.

on behalf of

AARP

March 1, 2004

NMPRC
STAFF EXHIBIT
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Introduction

Q. Would you please state your name and address?

A. Ben Johnson, 2252 Killearn Center Boulevard, Tallahassee, Florida 32309.

Q. What is your present occupation?

A. I am a consulting economist and president of Ben Johnson Associates, Inc., an economic research firm specializing in public utility regulation.

Q. Have you prepared an appendix that describes your qualifications in regulatory and utility economics?

Q. Yes. Appendix A, attached to my testimony, serves this purpose.

Q. Does your testimony include any attachments?

A. Yes. I have attached 4 maps. These maps were prepared under my supervision and are true and correct to the best of my knowledge.

Q. What is your purpose in making your appearance at this hearing?

A. Our firm has been retained by AARP to assist in the evaluation of the extent to which competitors serving mass market customers are "impaired" without access to unbundled local switching, consistent with the Triennial Review Order (TRO) of the Federal Communications Commission (FCC).

Due to time and resource constraints, I do not discuss every issue facing the New Mexico Public Regulation Commission (Commission) in this proceeding. In this direct testimony, I primarily focus on issues related to the first step in the Commission's analysis:

> ...the *Triennial Review Order* makes clear that as part of its operational and economic analysis, a state must determine the appropriate cut-off for multi-line DS0 customers, the so-called cross-over point to an enterprise market, as part of its granular review. The *Triennial Review Order* also makes clear that a state commission must first define the market or markets in which it will evaluate impairment by determining the relevant geographic area to include in each market. [First Amended Procedural Order, January 23, 2004, p. 4]

In general, I stress the importance of properly defining the market, and the risk of inadvertently reaching conclusions concerning impairment that are valid for mass market small business customers but are not valid for residential customers (e.g., those with low incomes or living on a fixed income). The Commission should take great care to ensure that the effect of its decisions in this proceeding is not to prevent competitive local exchange carriers (CLECs) from serving these residential customers. CLECs should be allowed to use switching UNEs to serve residential customers if it is not economically feasible for them to serve these customers using their own switch.

Q. Would you please describe how your testimony is organized?

A. Yes. In the first section, I briefly sketch the background of this investigation, focusing on the Commission's activities and certain portions of the TRO issued by the FCC. In the second section, I discuss various possible approaches to defining the appropriate geographic market for use in developing the impairment analysis. In the third section, I consider evidence available to the Commission which will enable it to appropriately define the class of customers that are classified as "mass market." In the fourth section, I discuss the important distinctions between business and residence customers–distinctions that are crucially important in reaching an appropriate result in this proceeding. In the fifth section, I briefly set forth my initial recommendations.

Q. Would you please briefly summarize the thrust of your testimony?

A. Yes. The Commission should adopt a relatively narrow geographic market definition, based upon small clusters of wire centers having homogeneous characteristics. In its Initial Status Report filed on December 19, 2003, Qwest Corporation (Qwest) responds as follows to the requests made of it in the Commission's November 17, 2003 Procedural Order.

> 1. **Regions of Qwest's New Mexico Service Area Where Qwest Intends to Claim the Triggers Have Been Met with Respect to Mass Market Switching.**
>
> Qwest believes, based on its current information, that the three-switch trigger is satisfied in the Albuquerque Metropolitan Statistical Area ("MSA").
>
> 2. **Regions of Qwest's New Mexico Service Area Where Qwest Intends to Claim the Potential for Deployment of Competitive Switches Militates Against a Finding of Impairment Pursuant to the Granular Inquiry.**
>
> In addition to the Albuquerque MSA, there are three other MSAs in New Mexico: Santa Fe, Las Cruces, and Farmington. ... Depending on the results of its analyses, Qwest may claim that competitors would not be impaired in serving mass market customers in one or more of these MSAs without access to unbundled local switching from Qwest. [Qwest's Initial Status Report, December 19, 2003, pp. 1-2]

I have not prepared a detailed analysis of Qwest's factual claims with regard to whether or not the trigger has been met. I anticipate commenting on these claims in my rebuttal testimony, once I have had an opportunity to further review the direct testimony submitted by Qwest, the CLECs and other parties.

Regardless of whether or not the trigger has been met, I disagree with Qwest's proposal to declare entire MSAs as the relevant geographic markets for use in this proceeding.

Such a geographic market definition is far too broad. Among other problems, it greatly increases the risk of inadvertently reaching a conclusion of non-impairment that is only valid with respect to a portion of the MSA–a conclusion that is not valid for other portions of the MSA.

Second, considering differences in revenue and profit levels, residential and small business mass market customers should be studied separately throughout this proceeding. In its TRO, the FCC recognized the potential importance of demand differences (e.g., average revenue levels) and it asked state commissions to perform granular analyses. If the Commission ignores important differences between residential and small business mass market customers, it may develop an impairment analysis that is not sufficiently granular in nature, or that reaches conclusions that are only valid for small business customers–conclusions that are not valid for residential customers.

Background

Q. Could you begin your background discussion by explaining how the FCC defines the mass market?

A. Yes. The FCC defines the mass market as follows:

> The mass market for local services consists primarily of consumers of analog "plain old telephone service" or "POTS" that purchase only a limited number of POTS lines and can only economically be served via analog DS0 loops. [TRO, ¶ 459]

Q. What has the FCC found regarding mass market switching specifically?

A. In the TRO, the FCC found that, on a national basis, "competing carriers are impaired without access to unbundled local circuit switching for mass market customers." [Id.] The FCC's

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In this passage, the FCC recognizes that profit margins in serving smaller customers are tighter than those available when serving larger customers, and this clearly has important implications in determining whether or not impairment exists. While the FCC didn't focus specifically on differences in average revenues per line or per customer, the overall thrust of this reasoning is consistent with an approach which draws such a distinction. As the revenue per customer declines, it becomes less and less feasible to profitably serve a customer using a CLEC's own switch, because insufficient profit margins exist to overcome the fixed (per-customer) costs of providing service using the CLEC's own facilities.

For this reason, one would anticipate that relatively few CLECs will serve residential customers using their own switches. Rather, CLECs that use their own switches primarily focus on serving larger customers–those generating much higher revenues per customer. As the FCC has recognized:

> ...although serving these customers is more costly than mass market customers, the facts that enterprise customers generate higher revenues, and are more sensitive to the quality of service, generally allow for higher profit margins." [Id., ¶ 128]

Unless these differences in customer characteristics and gross profit margins are adequately considered in defining the market, and there is a great risk of inadvertently reaching conclusions concerning impairment that are only valid for mass market small business customers–conclusions that are not valid for residential customers.

Q. Do you have any recommendations with regard to the distinction between residential and business (or low and high revenue) customers?

A. Yes. To the extent it is legally permissible, it could be helpful to stratify each geographic market

in order to analyze business and residential customer data separately. If this is done, the analysis of whether or not impairment exists could be performed separately with respect to business and residential customers. Thus, for example, even if there is reason to believe a "trigger" has been pulled (due to the presence of multiple CLECs) for the small business market or segment, this wouldn't automatically force the Commission to conclude that the "trigger" has also been pulled for the residential market or segment.

Another option would be to distinguish between the "enterprise" and "mass" market on the basis of revenue per customer, or on the basis of gross profit margin per customer (revenues minus direct costs), rather than purely on the basis of the number of DS0 lines. This could lead to more accurate and homogenous market classifications than a system based purely on the number of lines used by each customer (e.g., four DS0 or 12 DS0 lines).

For instance, rather than placing all customers with three or less lines in the "mass" market, the Commission might place all customers generating revenue of less than $100 per month in the "mass" market. With a classification system of this type, the Commission may find it has greater flexibility in determining the most appropriate "breakpoint" and thus it will have an enhanced ability to ensure that the defined markets are sufficiently homogenous.

Revenue-based market definitions would better enable the Commission to take into account differences in underlying market conditions, including typical rate structures, rate levels, and gross profit margins associated with different types of customers. This is consistent with language in the TRO that requires state commissions to take into account "the variation in factors affecting competitors' ability to serve each group of customers, and competitors' ability to target and serve specific markets economically and efficiently using currently available technologies." [Id., ¶ 495]

Regardless of what specific approach the Commission ultimately adopts, it should take great care to ensure that its decisions do not prevent CLECs from serving residential customers. CLECs should be allowed to continue using switching UNEs to serve residential

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF IMPLEMENTATION OF A BATCH HOT CUT PROCESS	CASE NO. 03-00403-UT
	And
IN THE MATTER OF IMPAIRMENT IN ACCESS TO LOCAL CIRCUIT SWITCHING FOR MASS MARKET CUSTOMERS	CASE NO. 03-00404-UT

[PUBLIC VERSION]

DIRECT TESTIMONY OF

DAVID BREVITZ

ON BEHALF OF

THE NEW MEXICO ATTORNEY GENERAL

MARCH 1, 2004

February 1994 I began work as an independent consultant in telecommunications, serving state utility commissions and consumer counsels. I am currently serving the Kansas Corporation Commission Advisory Staff on telecommunications matters. Since beginning work as an independent consultant, I have performed a variety of assignments and tasks related to formulation of telecommunications policy and cost study review for many state utility commission projects. As a result of these assignments, I have current expertise regarding competitive markets issues in telecommunications, and the detailed tasks associated with implementing the federal Telecommunications Act of 1996, pricing and costing, interconnection, network unbundling, resale, number portability, etc. A complete description of my background and experience is provided on Exhibit DB-1.

Q. Do you have other relevant qualifications?

A. Yes. In 1984 I was designated as a Chartered Financial Analyst by the Institute of Chartered Financial Analysts ("ICFA"). The ICFA is the organization which has defined and organized a body of knowledge important for all investment professionals. The general areas of knowledge are ethical and professional standards, accounting, statistics and analysis, economics, fixed income securities, equity securities, and portfolio management.

Q. What is the purpose of your testimony?

A. The purpose of this testimony is to provide analysis under the FCC's Triennial Review Order ("TRO"),[1] which requires a two-step evaluation of impairment in

[1] *Report and Order and Order on Remand and Further Notice of Proposed Rulemaking; In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Implementation*

access to local circuit switching for mass market customers, in the event that an Incumbent Local Exchange Company (ILEC) challenges the FCC's national finding of impairment. The consequence of this evaluation is a determination of whether unbundled local circuit switching (and by extension, the UNE-Platform or UNE-P) must continue to be provided on a UNE basis[2] by incumbent local exchange companies. This evaluation is to be conducted by state commissions on a granular, market-specific basis since the FCC lacked such information to make those determinations in the TRO. This analysis will be structured to follow paragraph 8 of the First Amended Procedural Order in this case.[3]

In its Initial Status Report, filed December 19, 2003, Qwest indicated that it believed it would challenge the FCC's finding that competition would be impaired without access to unbundled local switching (UBLS) in the Albuquerque Metropolitan Statistical Area (MSA), and that it was analyzing information regarding a similar challenge in the Santa Fe, Las Cruces and Farmington MSAs. Qwest's subsequent testimony filed February 16th claimed that:

> Qwest has presented evidence that satisfies the TRO requirements for rebutting the national presumption of impairment in the Albuquerque and

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of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Service Offering Advance Telecommunications Capability, CC Docket Nos. 01-338, 03-36; and 98-147 (August 21, 2003) ("Triennial Review Order" or "TRO").

[2] "UNE" is unbundled network element. The FCC makes its findings on the definition of "network element" at paragraphs 58-60 of the TRO. There, a network element is a facility or equipment capable of being used in the provision of a telecommunications service, and includes features, functions and capabilities that are provided by means of such a facility or equipment. If lack of access to a network element provided by the ILEC "impairs" the ability of CLECs to compete, then that network element is required to be "unbundled". TRO paragraphs 61-117.

[3] *First Procedural Order, In the Matters of Implementation of a Batch Hot Cut Process, and Impairment in Access to Local Circuit Switching for Mass Market Customers*, Case Nos. 03-00403-UT and 3-00404-UT, (January 23, 2004).

> Santa Fe MSAs. This evidence consists of the business case analysis presented by Mr. Watson, the evidence of facilities-based CLEC competition presented by Ms. Taylor, and Mr. Linse's testimony demonstrating that switches are readily available to CLECs. The absence of the need for an unbundling requirement in both MSAs is further shown by Qwest's testimony establishing that CLECs do not face any significant operational impairments in these MSAs. Accordingly, Qwest has shown that the national finding of impairment for local switching does not apply in the two MSAs for which it is seeking relief at this time.[4]

Q. What is meant by "impaired" or "impairment"?

A. Those terms have specific meaning and importance in this inquiry. Those meanings have been derived from FCC proceedings, and court decisions. In the TRO the FCC states that a "requesting carrier is impaired when a lack of access to an incumbent LEC network element poses a barrier or barriers to entry, including operational and economic barriers, that are likely to make entry into a market uneconomic."[5] When "impairment" exists, the FCC and state commissions can require the ILEC to provide the network element to CLECs on an unbundled basis. On the other hand, without impairment, there is no obligation on the part of the ILEC to offer the particular network element on an unbundled basis.

Q. What is the definition of "mass market" customers?

A. The definition per the TRO (paragraph 127) is as follows:

> Mass market consumers consist of residential customers and very small business customers. Mass market customers typically purchase ordinary switched voice service (Plain Old Telephone Service or POTS) and a few vertical features. Some customers also purchase additional lines and/or high speed data services. Although the cost of serving each customer is low relative to the other customer classes, the low levels of revenue that customers tend to generate create tight profit margins in serving them. The tight profit margins, and the price sensitivity of these customers, force

[4] Direct Testimony of Harry M. Shooshan III on behalf of Qwest, page 74, beginning at line 16.
[5] TRO, paragraph 7.

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A. The key factors are to determine whether such rolling access will allow CLECs to aggregate customers and then migrate them in efficient batch hot cuts to their own switching. Underlying this is the:

- Efficiency of the batch hot cut process;
- The minimum number of customers that can be migrated at one time via the batch hot cut process;
- The time limitation on the availability of unbundled local circuit switching; and,
- The economic viability of the presumed deployment of local switches to which these customers would be "hot cut".

Conclusion/Summary

Q. Please summarize your testimony.

A. I have reviewed the information available in this proceeding utilizing FCC definition and discussion of key concepts such as impairment, mass market consumers, market definition, and triggers. I recommend that the Commission not utilize the Metropolitan Statistical Area (MSA) as the market definition since it is too large and masks data and conclusions that should be drawn from review of individual wire center data, to the detriment of competition and consumers. I reviewed individual wire center data and concluded that the market areas should be defined in Albuquerque and Santa Fe as multiple adjacent wire center areas that share common UNE loop density zone characteristics and competitive metrics.

I recommend that the Commission find that the information and trigger analysis presented by Qwest is insufficient to overturn the national presumption of impairment for mass market switching in those markets Qwest did not establish that the identified competitive switch providers are actively providing voice service to mass market consumers; the data and analysis presented by Qwest do appear fully or properly consider the information that was provided in discovery and in response to bench requests; and the data and analysis do not separate the enterprise and mass markets. Qwest did not harmonize, address or otherwise explain the substantive differences between what its analysis indicated regarding mass market CLEC switching, versus clear discovery responses to the contrary of that analysis. The information presented by Qwest regarding providers of intermodal services should not be given any weight by the Commission because it did not address or provide additional information on the intermodal issues noted by the FCC in the TRO.

In its further review of economic and operational barriers, I recommend that the Commission view as critical matters the extent of actual availability of unbundled loops, following the FCC's decision to eliminate unbundling requirements associated with certain types of loops; the operational consequences associated with a physical network change from UNE-P to UNE-L; the untested nature of the Batch Hot Cut process; and, the growing importance of "bundling" of retail mass market telecommunications service offerings A finding of no impairment should not be made unless there is assurance that subsequent to the TRO taking certain loop types "off the table" as a UNE, there are in fact sufficient loops in proper

working condition to take up former UNE-P provisioned customers, and that service disruption associated with the physical change of network connections is minimal enough that customers and competition are not unduly disrupted.

In addition I support the staff recommendation regarding testing of the Batch Hot Cut Process before implementation or a finding of "no impairment". I note the retail market environment within which the Commission considers this matter is characterized by an emphasis on "bundled" services. Therefore, the Commission should consider how disruption of bundled packages currently provided by a CLEC using UNE-P can be avoided in any necessary transition to UNE-L. Finally, I defer making a recommendation regarding the multi-line cut-off issue pending a review of any responsive information that Qwest might file. I outline the key factors for the Commission to consider in making its determination on "rolling access".

Q. Does this conclude your testimony?

A. Yes.

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF IMPAIRMENT IN ACCESS TO LOCAL CIRCUIT SWITCHING FOR MASS MARKET CUSTOMERS	)	Case No. 03-00404-UT
IN THE MATTER OF IMPLEMENTATION OF A BATCH CUT PROCESS	)	Case No. 03-00403-UT

DIRECT TESTIMONY

OF

MICHAEL S. RIPPERGER

MARCH 3, 2004

NMPRC
STAFF EXHIBIT
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A. Yes. I filed Rebuttal Testimony in this case on the batch hot cut process on February 17, 2004. Also, please refer to Appendix A.

I. INTRODUCTION

Q. WHAT IS THE PURPOSE OF STAFF'S TESTIMONY?

A. The purpose of my Direct Testimony is to make recommendations to the Commission on how to conduct its impairment analysis in this proceeding as required by the Federal Communication Commission's (FCC's) Triennial Review Order (TRO). In order to provide the Commission with an appropriate context for its impairment inquiry, my testimony first addresses the status of competition in New Mexico, New Mexico state policy of promoting competition in telecommunications and how the provision of unbundled local circuit switching relates to retail, local exchange service competition and investment in New Mexico.

My testimony then makes recommendations on how the Commission should consider 1) defining the cross over point between the mass market and the enterprise market customers; 2) defining the market for purposes of its impairment analysis; and 3) conducting the Market Triggers Analysis ("Step 1") and the Post-Trigger Analysis ("Step 2") referred to in the Commission's First Amended Procedural Order issued on January 23rd, 2004.

Q. PLEASE SUMMARIZE STAFF'S RECOMMENDATIONS.

A. The Commission should conduct its impairment analysis in a manner that is consistent with the it's policy and practice of promoting telecommunications competition in New Mexico as required by federal and state law. The Commission's impairment inquiry should begin with the recognition that virtually no residential local exchange service competition existed in Qwest's New Mexico service territory until UNE-P was introduced in New Mexico after Qwest's 271 approval to sell long distance in April 2002. Further, Staff recommends that the Commission find impairment in all New Mexico markets unless Qwest clearly demonstrate that the FCC's triggers have been met and that no exceptional barrier to entry exists in any Commission defined market. Any conclusion to the contrary would result in the elimination of New Mexico's nascent competitive local exchange market.

Specifically, Staff recommends that the Commission should consider defining the cross over point between mass market and enterprise market customers to be self-validating. Staff also recommends that the Commission consider a market definition for its impairment analysis that aggregates contiguous wire centers, potentially by local calling areas; excludes or carves out all loops provisioned over IDLC; and that either defines residential and business segments as two separate markets or requires triggering carriers to provide local exchange service over their own switches to both segments within any geographically defined market. Staff also recommends that the Commission not consider Commercial Mobile Radio Service ("CMRS"), cable telephony and Voice Over Internet

Protocol ("VOIP") providers as "triggering" carriers in its two step triggers analysis. Because the data that Staff has reviewed so far in this case is incomplete[1] Staff does not make final recommendations to the Commission regarding the Market Trigger Analysis (Step 1) and Post Trigger Analysis (Step 2) and Staff anticipates that it may supplement its testimony regarding the two step trigger analysis.

Q. PLEASE DISCUSS THE FCC'S FINDINGS AND DIRECTION TO STATE COMMISSIONS AS THEY RELATE TO THE FILING OF YOUR DIRECT TESTIMONY IN THIS CASE.

A. In the TRO, the FCC determined that competitors are impaired, on a national basis, in their ability to offer service to mass market customers without access to certain unbundled network elements (UNEs). Mass market customers are defined by the FCC, in this context, as analog voice customers that purchase only a limited number of POTs lines and can only be economically served via DSO loops. The FCC directed state commissions to conduct nine-month proceedings to address its national impairment findings on a state specific market-by-market basis if challenged.

Qwest filed a Notice of Intent to challenge the FCC's impairment finding that competitive carriers are impaired without access to local circuit switching for mass market customers. By doing so, Qwest initiated this TRO proceeding. In

[1] For example, McLeod USA, Inc. has provided no data pursuant to the Commission's bench requests or

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The availability of unbundled local circuit switching for mass market customers at TELRIC based rates is integral to the continued development of telecommunications competition in the state of New Mexico. Staff therefore recommends that the Commission find impairment in all New Mexico markets unless Qwest clearly demonstrate that the FCC's triggers have been met and that no exceptional barrier to entry exists in any Commission defined market.

Staff also makes the following recommendations:

- the cross over point between mass market and enterprise market customers should be self-validating;
- the market adopted by the Commission should aggregates contiguous wire centers;
- the Commission should consider defining the market in terms of local calling areas;
- the market adopted by the Commission should exclude all loops provisioned over IDLC, or if the Commission includes IDLC provisioned lines in its market definition, Staff recommends that the Commission find that portion of the market is unavailable to competitors without UNE-P and that therefore the triggers in the Commission's Market Trigger Analysis (Step 1) has not been met;

- the Commission should either define residential and business segments as two separate markets in any geographic market designated by the Commission or the Commission should require triggering carriers to provide local exchange service over their own switches to both segments within any geographically defined market; and
- CMRS, cable telephony and VOIP providers should be excluded from the Commission's Market Trigger Analysis (Step 1) and Potential Deployment Analysis (Step 2).

Finally, Staff may provide other information in supplemental testimony clarifying its positions as more data becomes available.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.